

- b) means for making requests during row N for space in row N+1;  
and  
c) means for granting requests through an out-of-band link.

14. An apparatus according to claim 13, wherein:

each request includes through-the-switch routing information and priority level information.

15. An apparatus according to claim 14, further comprising:

d) means for buffering the request at each stage of the switch;  
and

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e) means for discarding low priority requests when the buffer reaches a threshold.

16. An apparatus according to claim 15, wherein:

said means for granting requests includes means for returning requests which have not been discarded before reaching the egress of the switch.

17. An apparatus according to claim 13, wherein:

each request for space is for a 52-byte chunk of space.

18. An apparatus according to claim 17, wherein bandwidth is arbitrated among ATM cells and variable length packets, said apparatus further comprising:

d) means for segmenting each packet larger than 52-bytes into a plurality of 52-byte chunks.

19. An apparatus according to claim 18, wherein:

each request includes through-the-switch routing information and priority level information.

20. An apparatus according to claim 19, further comprising:

e) means for buffering the request at each stage of the switch; and

f) means for discarding low priority requests when the buffer reaches a threshold.

21. An apparatus according to claim 20, wherein:

said means for granting requests includes means for returning requests which have not been discarded before reaching the egress of the switch.

22. An apparatus according to claim 21, further comprising:

g) means for discarding requests for all following segments of a packet when a request for one segment of the packet has been discarded.

23. An apparatus according to claim 13, wherein:

said requests are made in-band.